

### MONTHLY MICROCLIMATIC SUMMARY

SEPTEMBER 1967

### ENVIRONMENTAL DAT: BASE FOR REGIONAL STUDIES IN THE HUMID TROPICS

USATECOM Project No. 9-4-0013-01

US ARMY
TROPIC TEST CENTER
Fort Clayton, Canal Zone

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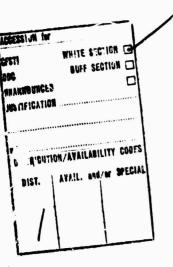
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### ENVIRONMENTAL DATA BASE FOR REGIONAL STUDIES IN THE HAMID TROPICS

### MONTHLY MICROCLIMATIC SUMMARY

SEPTEMBER 1967

### Prepared by

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### Conducted by

US Army
Tropic Test Center
Fort Clayton, Canal Zone
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Weather Engineers of Panama Corp.

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### MONTHLY MICROCLIMATIC SUMMARY

### Introduction

Monthly microclimatic data summarized in this series of reports were collected by the US Army Tropic Test Center and the Weather Engineers of Panama Corporation under the project, Environmental Data Base for Regional Studies in the Humid Tropics. The project is sponsored by the Advanced Research Projects Agency of the Department of Defense and by the Army Research Office, Office of the Chief of Research and Development. It is an investigation of microclimatic, air chemistry, vegetation, soils, microbiological, and macrofaunal conditions at selected sites in the principal tropical environments of the Panama Canal Zone and the Rio Hato Military Reservation. The objective of the project is to assemble quantitative environmental data for RDT&E purposes.

Sites. Data summarized in this report were collected at the Albrook Forest and Chiva Chiva sites. Figure 1 shows the site locations wit in the Isthmus of Panema. Geographic coordinates are shown below:

Albrook Forest	09°	Cl'N,	79 <sup>0</sup>	33'W
Chiva Chiva	09°	01'N,	79°	35'W

The Chiva open site and the Albrook Forest site are paired for comparative study of environmental conditions in a tropical semideciduous forest and in a large clearing. Both are located in a region where the annual precipitation is approximately 80 inches and there is a pronounced dry season. The other satellite sites were located primarily for soil studies purposes. Albrook and Fort Kobbe have climatic regimes similar to the principal sites.

The Albrook and Chiva Chiva main sites are approximately four kilometers apart. Each has a 46 meter walk-up tower and an air-conditioned building to house the recording equipment and observers. Both sites are approximately 30 meters above sea level. The top of the forest canopy at the Albrook site is about 26.5 meters above the ground.

Instrumentation. A wide range of climatic elements are measured at the Albrook and Chiva Chiva sites. Types of observations and frequencies are shown on Figure 2. The towers at the Albrook and Chiva Chiva sites are similarly oriented. Sensing equipment is mounted at several levels on the towers to provide measurements through the vertical profile. Additional instruments are emplaced in the immediate vicinity on or near the ground. All instrument exposures are duplicated at each site. Figures 3, 4, and 5 show the instrument array at these sites.

Data Reduction and Storage. All data, as applicable, are recorded at or reduced to each full hour and transposed to punch cards. These punch cards, together with all raw data, are stored in the Tropic Test Center Technical Library Annex.

The relative humidity data contained in this report required some adjustment due to the difficult problems in maintaining hair hygrometers in the humid trapics. The hygrometers show saturation at a time when the psychrometer shows a relative humidity well below 100%. For this reason the hourly measurements made by means of a hair hygrometer have been modified on the basis of simultaneous psychrometer readings of other levels. Details will be given in the fourth Semiannual Report. It can be assumed that the means of relative humidity presented in this volume are very close to the true means.

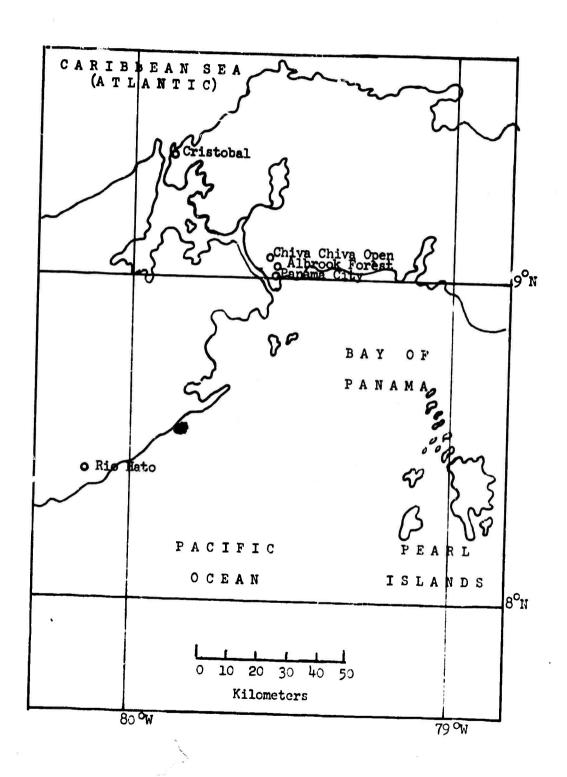


FIGURE 1. LOCATION MAP, ISTHMUS OF PANAMA

Frequency	<pre>Hourly#/Contiruously Hourly#/Continuously Once Daily</pre>	Hou. 1y (0600-1900 EST)	Hourly*/Continuously	Continuously	Once Daily	Continuously 4 Times Daily 4 Times Daily	Continuously Hourly**/Continuously
16.0	٠, ١	1	1	1	CV	N 1 1	ด ด
0.5 1.0 2.0 4.0 8.0 13.5 26.5 28.5 46.0	1 1 1	1	1	1	1	1 1 1	1 1
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13.5	<b></b>	1	н	•	Ø	1 1 1	3**
8.0	1 1 1	1	1	1	6	1 1 1	
0.4	441	1	7	.1	1	1 1 1	<b>ન</b> ન
0.0	<b>44</b> 1	1	7	1	•	110	3**
1.0	d 1 1	7	က	7	1	481	1 1
0.5	dd 1	1	-	•	-	1 1 1	1 1
Sfc	110	1	1	1	1	1 1 1	1 1
# Element:	Temperature: Dry Bulb Wet Bulb Grass Minimm	WBGT Index	Relative Humidity	Barometric Pressure	Evaporation	Precipitation: Recording Gage Manual Gage Stem Flow	Wind: Direction Speed

\* Observations made with sling psychrometer when recorders are inoperative.

\* Hourly.

Albrook and Chiva Chiva.
 Albrook only.
 Chiva Chiva only.

# Instrument descriptions are contained in the Environmental Data Base semiannual reports.

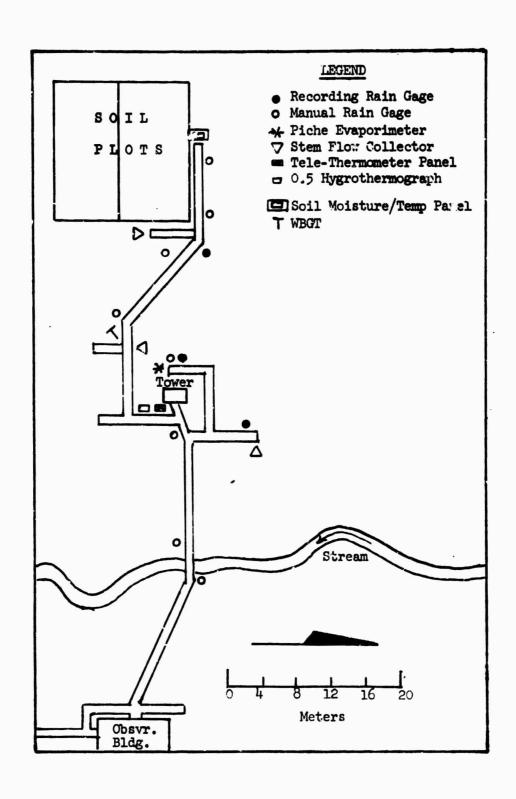


FIGURE 3. ALBROOK FOREST SITE, GENERALIZED PLOT

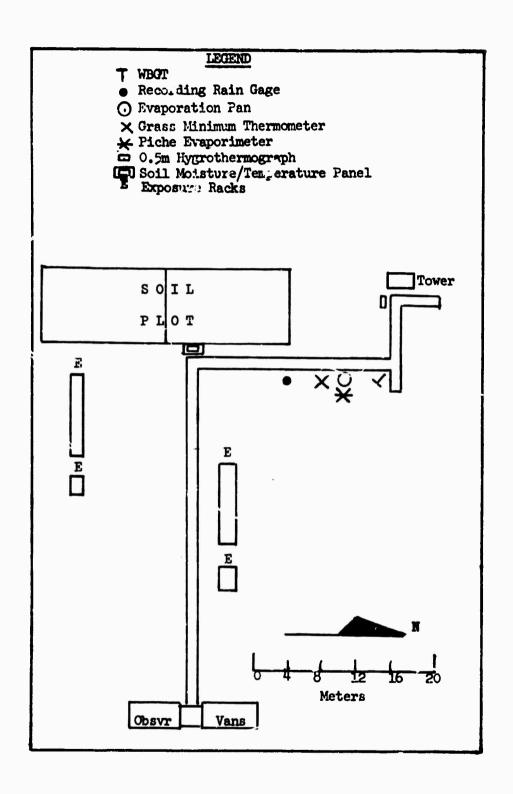


FIGURE 4. CHIVA CHIVA OPEN, GENERALIZED PLOT

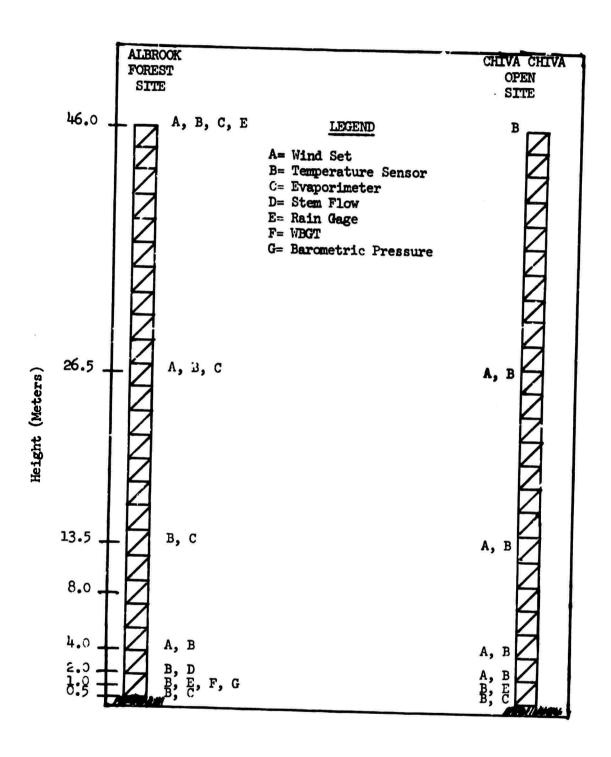


FIGURE 5. INSTRUMENT LOCATION ON TOWERS

# SUMNIARY OF METEOROLOGICAL OBSERVATIONS

HOURLY DATA SEPTEMBER 1967

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Monthly Summary	Min	720 70.0 76.6 87.0		. 69	70.0		594 69.5 76.1 84.9	594 69.3 76.0 84.7	594 69.0 76.0 84.8	69.4
Mo	Ng of Min. Mean Max.	720		720 69.1 76.7 88.6	713				594	657
			-/	73.6	74.0		73.8	73.8	74.0	74.5
	23	74.5		73.8	74.3		74.2	74.2	4.3	4.8
	22	74.7		74.1	74.6		74.5	74.5	74.7	75.0 /
	21	4.9		4.2	5.0		8.4	8.	6.4	5,3
	20	75.2		74.5	75.3		5.0	5.0 7	75.1	5.5
	19	75.5		75.0 /	6.5		75.3	75.4	15.6	5.9
	10 11 12 13 14 15 16 17 18 19 20 21 22 23 24	80.3 81.8 82.3 82.4 80.6 79.6 78.6 77.6 76.6 75.5 75.2 74.9 74.7 74.5 74.3		81.2 83.1 83.8 83.7 82.1 80.7 79.5 78.2 76.7 75.0 74.5 74.2 74.1 73.8 73.6	75.2 81.0 82.1 82.4 81.4 79.9 78.8 78.1 77.1 75.9 75.3 75.0 74.6 74.3 74.0 713 70.0 76.5 83.0		79.9 80.1 81.0 80.9 79.3 78.7 78.0 77.1 76.1 75.3 75.0 74.8 74.5 74.2 73.8	78.7 79.8 80.6 80.7 79.2 78.6 77.9 7.1 76.1 75.4 75.0 74.8 74.5 74.2 73.8	79.5 80.3 89.4 79.1 78.4 78.0 77.1 76.2 75.6 75.1 74.9 74.7 74.3 74.0	78.2 79.3 89.2 80.4 79.4 78.7 77.9 77.4 76.7 75.9 75.5 75.3 75.0 74.8 74.5 657 69.4 76.1 83.7
	17	77.6	CT Me	78.2	78.1	time	77.1	7.1	77.1	77.4
Monthly Meens of Air Temperature by Hour (o F)	16	8.6 7	this.	.6.2	8.8	t this	8.0	17.9	8.0	7.9 7
ature h	15	9.6/	ture	30.7	6.6	ture	78.7	9,6	4.8	78.7
ешрег	7.	30.6	Padme	32.1	1.4	empera	9.3	19.2	9.1	19.4
f Aur T	13	32.4	r air b	33.7	32.4	r air	90.9	30.7	90.4	30.4
o su s	12	12.3	ited fo	3.8	12.1	ted fo	0.1	9.0	0.3	19.2
hly M	=	3) 8 (6	trumer	33.1	0.18	trumer	1.0	8.6	9.5	9.3
Mont	01	90.3 (	not instrumented for air temperature at this time	81.2	79.2	not instrumented for air temperature at this time	.9.9	78.7	78.3	78.2
	60						-			
	80	75.9	Thus level was	76.4	75.3	This level was	75.6	75.5	75.3	75.2
	6	73.9	푠	73.7	73.5	Ē	73.6	73.5	73.5	73.6
	- %	73.4		72.8	73.1		72.9	72.9	72.9	73.4
	0.5	73.4		17.8	73.0	*=: **	72.7	72.8	72.9	73.6
	2	73.5		72.9	73.2		73.0	73.0	73.0	73.7
	03	3.6		3.0	3.4		£.	3.3	4	3.9
	02	0.4		73.3	73.5		3.4	73.5 7	73.5 7	74.1
	010	4.2 7		73.4	13.7 3		73.6 7	13.6 7	73.7 7	74.3
ē	Level	46.0 m 74.2 74.0 73.6 73.5 73.4 73.4 73.9 75.9 78.7	28.5 m	26.5 m 73.4 73.3 73.0 72.9 72.8 72.8 73.7 76.4 79.3	3.5m 73.7 73.5 73.4 73.2 73.0 73.1 73.5 75.3 77.5	8.0 m	4.0m 73.6 73.4 73.3 73.0 72.7 72.9 73.6 75.6 77.6	2.0m 73.6 73.5 73.3 73.0 72.8 72.9 73.5 75.5 77.3	1.0 m 73.7 73.5 73 4 73.0 72.9 72.9 73.5 75.3 77.0	0.5 m 74.3 74.1 73.9 73.7 73.6 73.4 73.6 75.2 76.8
Exposure	Site L	4	28	(9)119	_=		40010			
	ြလ	L								

	86.9		87.2	87.7		90.1	30.6	91.2	93.2
_	76.4		76.3	76.2		0.2	7.1	77.4	7.7
	- 1		8.2	7.5		8.1	7.8	7.0	7.0/
-	14 6		11 6	12 6		81 6	91	14	20
	.3		.8	.5		٠	.7 6	.5	.5
	5.		1 73	<del>-8</del>		2 73	1 73	9 73	- 8 -
_	9 74.		6 74.	2 73.		5 74.	3 74.	3 73.	73.
	74.		7.	7.		74.	7.	7.	74.
	75.1		74.8	74.7		74.9	74.8	74.8	74.7
	75.4		75.2	75.0		75.2	75.2	75.2	75.1
	76.0		75.7	75.5		75.7	75.8	75.6	75.7
	80.9 81.8 81.8 80.1 79.5 78.1 77.5 76.7 76.0 75.4 75.1 74.9 74.5 74.3 714 (7 76.4 86.9		80.8 81.8 82.0 80.3 79.7 78.2 77.5 76.8 75.7 75.2 74.8 74.6 74.1 73.8 711 68.2 76.3 87.2	81.2 82.0 81.9 80.2 79.7 78.4 77.4 76.6 75.5 75.0 74.7 74.2 73.8 73.5 712 67.5 76.2 87.7		83.8 84.1 84.1 82.1 81.3 79.7 78.6 77.3 75.7 75.2 74.9 74.5 74.2 73.5 681 68.1 77.0 90.1	84.4 84.7 84.7 82.6 81.7 79.9 78.8 77.3 75.8 75.2 74.8 74.3 74.1 73.7 681 67.8 77.1 90.6	83.8 85.1 85.4 85.5 83.2 31.5 79.8 78.8 77.2 75.6 75.2 74.8 74.3 73.9 73.5 714 67.0 77.4 91.2	86.4 86.0 86.0 83.9 81.9 80.0 78.8 77.2 75.7 75.1 74.7 74.2 73.8 73.5 720 67.0 77.7 93.2
	77.5	time	77.5	77.4	time	78.6	78.8	78.8	78,8
	78.1	not instrumented for air temperature at this time	78.2	78.4	not instrumented for air temperature at this time	79.7	79.9	9.64	80.0
-	79.5	ture	79.7	19.7	ture a	81.3	81.7	51.5	91.9
	30.1	amper?	30.3	30.2	mper	32.1	9.7	3.2	13.9
	1.8	air	2.0	1.9	air te	4.1	4.7	5.5	
	8 8	ed tor	.8	8 0.3	ed for	1.18	1.7 8	5.4 8	8 0 9
	8	ument	8.	.2 8%	ument	86	4.84	.1 89	.4 86
	74.4 80	instr	79.6 80	79.8 81	instr	82.4 83	82.9 84	8.85	84.6 86
		s not	-		•			-	
_	77.		77.	78.	el wa	80.	. 80	. 81.	82.
	75.4	Thus level was	75.5	75.6	This level was	78.5	78.9	78.7	79.5
	73.8	Ę	73.5	73.5	Ē	75.0	75.3	75.0	75.2
	73.3		72.8	72.4		72.8	72.6	72.3	72.2
	73.5		73.1	72 8		73.6	72.8	72.4	72.3
-	3.7		3.2	2.9		2.9	2.7	2.5	2.4
	3.1.7		3.2 7	2.8 7	-	3.0 7	2.9 7	2.7 7	2.6 7
-	3.9 7		3.4.7	3.0 7		3.3 7	3.2 7	3.0.7	3.0.7
_	46.0m 74.0 73.9 73.1 73.7 73.5 73.3 73.8 75.4 77.8		26.5 m 73.6 73.4 73.2 73.2 73.1 72.8 73.5 75.5 77.9	13.5 m 73.3 73.0 72.8 72.9 72 8 72.4 73.5 75.6 78.0		4.0 m 73.5 73.3 73.0 72.9 73.6 72.8 75.0 78.5 80.3	73,4 73.2 72.9 72.7 72.8 72.6 75.3 78.9 80.8	73.3 73.0 72.7 72.5 72.4 72.3 75.0 78.7 81.5	0.5m 73.2 73.0 72.6 72.4 72.3 72.2 75.2 79.5 82.1
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	46.0	28.5 m			8.0 m	4.0	2.0	1.9	0.5
		(ə	ns u	ədO)	PVIA	Và C	СРІ		

SUMMARY OF METEOROLOGICAL OBSERVATIONS HOURLY DATA

HOURLY DATA

nary*	7								-	
Monthly Summary*	+					_				
Mont			. *							
	24	9.9		5.7	5.9		5.7	5.7	5.7	5.8
	23	6.1		6.5	5.8		6.0	6.0	6.5	6.2
	22	5.2		5.2	5.5		8.8	5.5	4.9	5.9
	21	5.7		5.1	5.1		5.2	5.2	5.0	5.7
	20	5.3		4.7	4.9		4.5	4.5	4.0	9.1 10.0 7.7 7.7 6.6 5.5 5.1 5.7
	19	8.1 6.1 5.3		5.7	5.3		3.9 4.5	3.8	1:	5.5
	19			6.3	7.4		5.0	4.8	8.8	9.9
our	17	12.0 11.7 11.6 11.1 13.6 13.3 11.3 10.5	time	12.5 12.7 13.8 12.8 15.0 13.5 12.3 12.4	9.5	tire	8.0	7.7	7.0	7.7
F. F.	16	11.3	at this	12.3	10.9	at this	9.5	8.1	8.2 7.0	7.7
eratur	15	13.3	ature	13.5	12.8	ature	9.0	8.7		10.0
Тетр	14	13.6	tempet	15.0	13.3	empe	11.9	11.5	9.8 11.3	9.1
of Alt	13	11.1	or air	12.8	13.1	or air	9.8	10.2 10.0 11.5	8.	8.6
Ranges	12	11.6	inted f	13.8	11.7	nted f	10.9	10.2	8.8	9.5
Monthly Ranges of Air Temperature by Hour (0.7)	10 11 12 13 14 15	11.7	not instrumented for air temperature at this time	12.7	9.0 10.8 11.7 13.1 13.3 12.8 10.9	not instrumented for air temperature at this	8.4 9.2 10.9 9.8 11.9 9.0	8.3 8.3	8.6	7.4 8.0 9.2
W	2	12.0		12.5	9.0	not in	8.4	<b>8</b> .3	7.4	7.4
	60	7.3 10.5	This level was	7.6 10.7	7.9	l was	8.0	7.9	6.8	6.9
	80		ls leve		6.1	This level was	5.4	5.2	1.7	5.3
	02	6.1	£	5.8	ი•9	귶	6.2	6.5	6.8	6.3
	90	6.0		0.9	5.2		4.9	5.0	5.0	6.9
	02	5.5		6.1 6.0	4.8		5.1	5,2	4.9	6.4
	04	5.4			5.8		5.1	5.2	5.1	6.0 6.1 6.4
	03	٠, و.		6.2	5.5		5.9	5.7	S. 5.	6.0
	05	6.1		5.9	6.0		6.0	5.9	5.9	6.1
	10	6.3		5.8	5.6		5.3	5.3	5.5	8.8
sure	Level	46.0 m	28.5 m	26.5 m	13.5 m	8.0 m	4.0 m	2.0 m	1.0 m	0.5 m
Exposure	Site				le js	Fore	ook (	ıd IA		

\* No monthly summary was computed for the ranges.

· <u>·</u> ···								
5.8		6.3	6.5		5.9	5.8	6.1	6.2
9.9 11.9 13.0 12.3 15.7 13.2 10.3 9.8 7.8 6.1 6.4 6.2 6.0 6.2 5.8		1 9.8 10.9 12.9 11.9 15.7 13.1 10.9 10.0 8.0 6.0 6.3 5.8 5.2 5.9			8.	7.3 6.1		6.0
0.9		5.2	5.7		9.9	7.3	7.0	7.0
6.2		5.8	5.9		5.8 6.3 6.6	9.9	6.7	6.9
4.9		6.3	5.5		5.8	6.1	6.0	5.9
6.1		6.0	5,3		5.9	5.9	5.4	5.7
7.8		8.0	10.0 10.3 12.2 11.4 16.5 13.9 10.6 10.1 7.9 5.3 5.5 5.9 5.7 5.7		4.8	12.4 14.8 14.7 13.5 19.9 12.4 14.C 12.1 8.5 5.9 6.1 6.6	13.9 20.0 15.3 12.2 11.6 7.0 5.4 6.0 6.7 7.0 6.1	2 18.6 16.8 15.0 16.5 21.5 16.0 12.8 11.5 7.2 5.7 5.9 6.9 7.0 6.0
8	time	10.0	10.1	time	13.3 14.4 13.2 19.5 12.3 13.8 11.4	12.1	11.6	11.5
10.3	s not instrumented for air temperature at this time	10.9	10.6	s not instrumented for air temperature at this time	13.8	14.c	12.2	12.8
13.2	rature	13.1	13.9	rature	12.3	12.4	15.3	16.0
15.7	tempe	15.7	16.5	tempe	19.5	19.9	20.0	21.5
12,3	or air	11.9	11.4	or air	13.2	13.5	13.9	16.5
13.0	anted 1	12.9	12.2	inted 1	14.4	14.7	15.2	15.0
11.9	strum	10.9	10.3	us Erru me	13,3	14.8	8 16.2 15.7 15.2	16.8
6.6	not in	9.8		not in	11.6	12.4	16.2	18,6
7.1		æ	7.6		10.3	10.9		
6.6 6.2	This level wa	6.4	7.0	This level wa	9.4 9.1 10.	9.2 ,10.	10.8 13.	12.0
	Ę	6.7	6.8	T	9.4	<b>6.</b> 3	9.5	8.2
5.3		0.9	7.1 6.9 7.5		7.8 7.5	7.8 7.5	8.1	8.2 7.9 8.1 8.2 12.0 15.
7.3		6.6	6.9			7.8	8,3	7.9
7.9		7.0	7.1		6.7 7.2	7.7	7.7	8.2
7.8		7.5	5:		6.7	7.3	7.3   7.3	7.1
6.7 7.5 7.8 7.9 7.3 5.3		6.2 7.6 7.5 7.0 6.6	7.8		7.1	7.6		7.2
6.7		6.2	5.9		5.7	6.3	6.8	6.5

# SUMMARY OF METEORCLOGICAL OBSERVATIONS HOURLY DATA SEPTEMBER 1967

	Max.	- <del></del> -			<u> </u>		•	<u> </u>	<u> </u>	2
nary	N N			100	100		1000	001	001	100
Sum	. Mean	88		68	91		94	95	96	
Monthly Summary	Min.	62		54	26		89	89	89	75
Ĭ	No of obs.	649		646	642		594	594	594	9
	24	94		96	97		98	48	86	96
	23	26		96	26		80	86	86	96
	22	94	-	26	96		86	86	86	96
	21	93		95	98	~	6	97	86	96
	20	89		98	95		97	97	97	96
	19	95		94	94		37	97	97	26
	18	88		06	16		96	96	26	56
JT OF	17	85	is time	83	68	Is thre	93	98	95	34
by H	91	2	at th	2.	98	at th	95	93	94	94
ımidity	15	8	- Sipimi	<b>.</b> .	8	appu	06	91	93	16
ive H	=	79	Hve h	11	08	Hve h	88	8	93	06
Monthly Means of Relative Humidity by Hour (%)	13	92	not instrumented for relative humidity at this time	74	77	not instrumented for relative humidity at this	<b>8</b>	98	88	06
o supe	12	92	nted fo	74	79	nted f	<b>2</b>	98	68	16
hly M	Ξ	9/	strume	75	8	strume	84	89	91	26
Mont	97	1	not in	81	83	not fin	89	91	94	94
	60	98	Was	98	16	was	93	94	96	96
	90	16	This level	26	96	s level	97	6	86	96
	02	94	H	96	26	This	86	86	86	97
	90	95		96	97		86	86	86	. 16
	05	36		- 26	86		66	86	86	96
	04	9.4		96	97		86	86	86	97
	03	94		96	97		86	89	86	96
	02	94		96	97		86	86	89	97
	10	94		96	26		86	86	86	96
ure	Level	46.0 m	28.5 m	26.5 m	3.5 m	8.0 m	4.0 m	2.0 m	1.0 m	0.5 m
Exposure	Site	4	-23		,5 15	910T)	:{60	1d IA	_	

89     91     91     91     92     94     34     693     55     89       91     92     93     93     95     95     710     56     89       92     93     94     96     96     712     56     89       94     95     96     97     97     682     57     90       94     95     96     97     97     681     56     89       95     96     97     97     681     56     89
91     91     92     94     34     693       92     93     93     95     95     710       93     94     94     96     96     712       94     95     96     97     97     681       95     95     96     97     97     681       96     97     97     681
91 91 92 94 94 92 93 93 95 95 93 94 94 96 96 94 95 96 97 97 95 95 96 97 97
91 91 92 94 92 93 93 95 94 95 96 97 95 95 96 97 96 97 98 98
91 91 92 93 93 94 94 95 96 95 96 96 97 98
91 93 94 95 95 95 95 95 95 95 95 95 95 95 95 95
1
8 6 6 6 6 2 7 4 4 5
8 8 8 6 6 6 6 7 6 6 6 6 6 6 6 6 6 6 6 6
86 88 88 88 88 88 88 88 88 88 88 88 88 8
4 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8
82 81 81 87 90 79 88
80 179 179 179 179 179
This level was not instrumented for relative humidity at this time  5 93 86 81 78 74 74 79 81 84 85  6 92 86 81 76 74 74 78 81 83 86  This level was not instrumented for relative humidity at this time  4 87 83 78 75 72 74 79 80 83 86  This level was not instrumented for relative humidity at this time  This level was not instrumented for relative humidity at this time  This level was not instrumented for relative humidity at this time
75 74 74 72 72 72 72
5 trume strume 3 trume 3 trume 5 trume
81 81 81 not in 78 77
86 86 86 87 83 83 83 83 83
5 92 86 This level was 6 93 86 6 92 86 This level was 7 87 83 This level wis 1 87 83
95 96 96 17 99 94 174 174 174 174 174 174 174 174 174 17
96
96 26 26 86 86 86 86 86 86 86 86 86 86 86 86 86
96 6 6 7 6 6 8 6 8 6 8 6 8 6 8 6 8 6 8 6
26 96 6 6 86 86 86 86 86 86 86 86 86 86 86 86 86 86 8
90 56 69 86 86 86 86 86 86 86 86 86 86 86 86 86
90 90 60 60 60 60 60 60 60 60 60 60 60 60 60
46.0m 28.5m 76.5m 13.5m 4.0m 1.0m

SUMMARY OF METEOROLOGICAL OBSERVATIONS

HOURLY DATA SEPTEMBER 1967

•										
Monthly Summary*										<del></del>
hly Su						-				
Mont										
	24	10		68	S		14	14	14	16
	23	11						14	15	16 1
	22	1.2.1		12	 6		9		 	17 - 1
	21 2			12 1			2	•		
		12		alleria a						17
	20	16		-13	13			<b></b>	<b>c</b> o	17
	19	17			14		<b></b>	<b></b>	<b>œ</b>	18
	18	23	<b>e</b>	<b>5</b>	2	2	01		o 	
Hour	17	22	his ti	29	21	His th	16	14	80	18
λq λι	16	24	y at t	53	27	y at t	21	=======================================	=	20
lumidi	15	29	umidi	88	30	umidi	24	83	17	22
tive H	14	32	tive h	43	42	ttve i	26	24	22	23
Monthly Ranges of Relative Humidity by Hour (%)	13	27	ot instrumented for relative humidity at this time	39	39	ot instrumented for relative .mmidity at this time	32	32	32	13
nges	12	34	nted 1	4	36	nted 1	53	24	13	19
hly Ra	=	33	strume	39	36	strume	27	25	23	20
Mont	10	31	not In	35	53	not in	22	91	1,4	13
	60	25	SEW I	27	19	sew I	8	18	12	<b>∞</b>
	80	15	This level was	91	12	This level was	10	œ	S	9
	07	9	Ē	<b>6</b> 0	4	Ē	2	2	9	9
	90	9		S	4		7	4	**	16
	95	7		Ŋ	4		4	4	4	17
	04	6		S	4		4	47	4	17
	03	2		12	s.		4	4	2	16
	02	01		12	9		<u>,</u>	ر. د	4	5
İ	 	51		11	<b>4</b>		LO	2	4	14
an	Level	46.0 m	28.5 m	26.5 m	3.5 m	8.0 m	4.0 m	2.0 m	1.0 m	J. 5 m
Exposure	Site 1	- 4	-7-			910T)			_	
	S	J								

\* No monthly summary was computed for the ranges.

16		14	15	-	<b>6</b> 0	7		l
12			6		<b>6</b> 0	. و		-
13		16	14	-	10	9		t
91	-	15	18		13	21		
91		17   15	17		15	14		:
22		16	20		17	16		4
61		17 - 16	20	41	19	19	•	
56	not instrumented for relative humidity at this time	24	26	not instrumented for relative humidity at this "ime	25	25	not instrumented for relative humidity at this time	
30	y at th	27	28   26	/ at th	31	29	y at th	0.0
36	ımidit.	34	37	gibim	36	35	umidit	36
37	tive h	33	34	tive h	37	35	tive h	30
38	or rela	31	32	or rela	33	30	or rela	2.2
44	nted f	40	40	nted f	37	36	inted f	33
37	strume	32	34	struma	34	37	strume	36
27	not in	22	27	not in	30	35		63
22	al was	27	21	al was	76	7.7	srw le	4.2
14	This level was	20	22	This level was	26	23	This level was	36
7	Ħ	01	12	£	27	31	Th	7
6		10	•		æ	7		Ξ
12		~	÷		æ	S		a
œ		3	13		œ	20		-
12		7	12		Ξ	01		9
6		5	7		~			2
1.5		=	13		7	$\infty$		2

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### SUMMARY OF METEOROLOGICAL OBSERVATIONS

### HOURLY DATA SEPTEMBER 1967

ummary	Min. Moan Max.	74.6 80.0	74.7 80.0	75.1 80.9	.756 .875	0.01 15.23 2.55 0.01 9.29 2.20 0.01 17.62 2.50 0.01 12.83 2.80
Monthly Summary	Min.	717 68.0 74.6	717 68.0 74.7	68.7 75.1	.620 .756	
Mo	No of			111	720	70 57 63 57
-		75.9 76.5 77.0 77.0 77.0 76.5 76.3 76.0 75.6 75.1 74.6 74.2 74.2 73.9 73.6 73.3	9 76.1 76.8 77.1 77.3 77.3 76.7 76.5 76.2 75.8 75.2 74.7 74.3 74.2 74.0 73.7 73.4	4 76.0 75.8 77.5 78.2 78.3 77.3 76.8 76.5 76.2 75.7 75.0 74.7 74.5 74.3 74.1 73.9	.806 .801 .782 .754 .729 .715 .708 .705 .717 .732 .747 .767 .780 .784 .778	0.04
	23   24	73.6	73.7	74.1	.784	0.11 0.04 0.06 0.13
	22	73.9	74.0	74.3	. 780	0.20 0.20 0.21 0.70
	31	74.2	74.2	74.5	.767	0.51 0.47 1.26 1.13
	20	74.2	74.3	74.7	.747	0.37 0.31 0.26 0.43
	19	74.6	74.7	75.0	.732	0.57 0.33 0.23 0.15 0.07 0.18 0.37 0.51 0.20 0.11 0.05 0.52 0.15 0.11 0.04 0.13 0.20 0.31 0.47 0.20 0.04 0.04 0.05 0.15 0.10 0.04 0.05 0.10 0.04 0.26 1.26 0.21 0.06 0.04 0.05 0.10 0.04 0.26 1.26 0.21 0.06 0.04 0.05 0.10 0.05 0.10 0.05 0.04 0.05 0.10 0.05 0.04 0.05 0.10 0.05 0.04 0.05 0.10 0.05 0.05 0.05 0.10 0.05 0.10 0.05 0.10 0.10
	17 18	75.1	75.2	75.7	.117	0.07 0.13 0.10 0.19
lour	17	75.6	75.8	76.2	. 705	0.15 0.04 0.02 0.07
Monthly Meens $^2$ of other Elements by Hour	16	76.0	76.2	76.5	.708	0.23 0.11 0.16 0.17
ement	14 15	76.3	76.5	76.8	.715	0.57 0.33 0.52 0.15 0.75 0.36 0.79 0.42
ther E	14	76.5	76.7	77.3	.729	0.57 0.52 0.75 0.79
2 of o	11   12   13	77.0	77.3	78.3	.754	0.03 0.05 0.09 0.01
Means	12	77.0	77.3	78.2	.782	0.08
nthly	11	77.0	77.1	77.5	.801	0.02 0.06 0.12 0.01 0.05 0.07 0.02 0.06 0.10 0.02 0.02 0.07
M	10	76.5	76.8	75.8	. 806	0.06 0.05 0.06 0.02
	60		76.1	76.0	.801	0.02 0.01 0.02 0.02
	90	75.0	74.9	74.4	.787	0.39 0.15 0.23 0.07 0.36 0.12 0.24 0.10
	07	73.2	73.1	72.9	.766	
	90	72.4	72.5	72.8	.746	0.01 0.01 0.01 0.00 0.01 0.00
	0.5	72.3	72.3	72.9	.738	0.00
	04	72.5	72.5	73.0	.735	0.10
	03	72.7	72.7	73.2	.741	0.13 0.18 0.10 0.01 0.01 0.04 0.08 0.14 0.01 0.00 0.11 0.05 0.02 0.01 0.00 0.12 0.13 0.01 0.00 0.01
	02	73.1 72.9 72.7 72.5 72.3 72.4 73.2 75.	73.1 73.0 72.7 72.5 72.3 72.5 73.1 74.	73.6 73.4 73.2 73.0 72.9 72.8 72.9	.766 .752 .741 .735 .738 .746 .766	0.13 0.04 0.11 0.12
	0.1	73.1	73.1	73.6	.766	0.20 0.14 0.07
Exposure	Codel	WB (4.0 m)	W8 (2.0 m)	WB (0.5 m)	BP	P1 P2 P4
od XI	Site		(911	orest s	ok (L	ordIA

	76.5 77.0 77.4 77.3 77 6 76.9 76.5 75.6 75.4 75.1 74.5 74.1 73.9 73.6 73.6 73.2 705 67.8 74.7 80.5	76.8 77.3 77.6 77.7 78.0 77.0 76.8 75.7 75.5 75.1 74.5 74.1 73.9 73.5 73.4 73.0 704 67.2 74.7 81.2	77.4 78.7 79.5 78.9 79.0 78.2 77.2 76.3 75.9 75.5 74.7 74.2 74.0 73.7 73.4 72.9 719 67.0 75.1 85.0	0 . 380	47 0.01 4.72 0.90	
	7	74.	75.]	. 85(	4.7	
	67.8	67.2	67.0	720 .720 .850	0.01	
	705	704	719			
	73.2	73.0	72.9	178.	0.01	
	73.6	73.4	73.4	878	0.00	
	73.6	73.5	73.7	.875	0.00	
	73.9	73.9	74.0	.860	0.02	
	74.1	74.1	74.2	841	0.03	
	74.5	74.5	74.7	. 827	7.26	
_	75.1	75.1	75.5	811	).13	
	75.4	75.5	5.9	.898 .903 .899 .878 .845 .827 .813 .804 .800 .811 .827 .841 .860 .875 .878 .871	0.09 0.09 0.16 0.06 0.08 0.36 0.03 0.07 0.07 0.13 0.26 0.03 0.02 0.00 0.00 0.01	
-	5.6	15.7	·6.3 -	804	.07	
	6.5 7	6.8 7	7.2 7	813	.03 0	
_	6.9	7.0.7	8.2 7	827 .	.36 0	
	767	8.0 7	9.0 7	845 .	0 80.	
	7.3 7	7.7.7	8.9 7	878	0 90.	
	7.4 7	7.6 7	9.5 7	. 668	.16 0	
	7.0.7	7.3 7	8.7 7.8	. 606	0 60	
	.5 7	8.8	7.4 7	;• 86g	0 60	
	<b>∞</b>	.0 76	4	382 .		
	1.7 73	3.6 76	1.0 76	. 8	00	
	.3 73	. 0 73	.9 74	45 . 8	0 TO	
	. 5 72	.2 72	.0 71	36 .8	00	
	73.0 72.8 72.6 72.4 72.5 72.3 73.7 75.	72.8 72.6 72.3 72.1 72.2 72.0 73.6 76.0	72.7 72.6 72.3 72.1 72.0 71.9 74.0 76.	.855 .840 .831 .829 .836 .845 .863 .882	0.01 0.01 0.00 0.02 0.00 0.01 0.00 0.00	
	.6 72	.3 72	.3 72	31 .8	00 00	
	.8 72	.6 72	.6 72	. 0	0.0	
	.0   72.	8 72.	7 72.	. 84	11,0.0	and the same of th
				.85	0.0	
	W8 (4.0 m)	WB (2.0 m)	WB (0.5 m)	æ	S	

WB - Wet builb temperature ( $^{\rm OF}$ ) BP - Barometric pressure (in. of Hg minus 29.0)

 $^2$  Monthly means of precipitation are computed for presibitation days.

Precipitation totals are substituted for the mean in the monthly summary.

PS - Precipitation at 1.0 m. in open area (in.) P1 - Precipitation at 46.0 m. above canopy (in.) P2 - Precipitation under full canopy (in.)

P3 - Precipitation under drip canopy (in.)
P4 - Precipitation under open canopy (in.)

### SUMMARY OF METEOROLOGICAL OBSERVATIONS HOURLY DATA

SEPTEMBER 1967

mary*	H					
Monthly Summary*	╁			<u> </u>		
Month	-					<del></del>
	24	5.4	5.4	5.2	.120	0.00
	23	5.1	5.0	5.9		0000
	22	5.4	5.2	5.2	115	0.00
	21	6.0		5.2	120	2.93
	20	3.9	4.0 5.6	4.4	136	2.99
	19	4.2		4.6 4.4 5.2 5.2 5.9	.145 .136 .120 .115 .115	0.97
		4.9 5.4 5.1 4.6 7.0 7.0 7.0 6.2 5.2 4.2 3.9 6.0	5.3 4.1	5.6	.145	0.03 2.54 0.84 0.46 0.26 0.25 0.97 1.74 1.97 0.56 0.00 0.07 0.03 2.19 0.52 0.37 0.02 0.29 0.36 1.19 1.39 0.00 0.00 0.00 0.15 2.49 0.82 0.39 0.04 0.41 0.11 0.99 2.49 0.59 0.00 0.00 0.00 0.00 0.00 2.79 1.04 0.54 0.20 0.43 0.03 1.24 2.24 0.00 0.00 0.00
L L	17	6.2	0.9	5.9	150	0.02.00.004.00
by Hou	15 16 17 18	7.0	8.	8.9	140	3.397
nents	15	7.0	6.9	7.0	130	2.54 0.84 0.46 2.19 0.52 0.37 2.49 0.82 0.39 2.79 1.04 0.54
er Eler	14	7.0		6.5	115	2. 29
Monthly Ranges <sup>2</sup> of other Elements by Hour	10 11 12 13 14	4.6	5.4 5.8 4.7 7.0	4.6 5.5 6.3 6.6 6.8 6.5 7.0 6.8 5.9 5.6	.120 .130 .115 .130 .140 .150 .145	0.03 2.54 0.84 0.46 0.03 2.19 0.52 0.37 0.15 2.49 0.82 0.39 0.00 2.79 1.04 0.54
nges <sup>2</sup>	12	5.1	8.8	9.9	120	
hly Ra	=	4.	5.4	6.3		
Mont	10	<b>4.</b> 9	5.2	5.5	.105 .120 .115 .130	60.00
	60	5.1	4.7	4.6	120	0.02
	80	4.3	4.	5.1	105	0.02
	02	6.1	6.0	9.9	120	0.00 0.17 0.14 0.02 0.09 0.19 0.00 0.05 0.02 0.00 0.08 0.12 0.00 0.37 0.02 0.03 0.00 0.24
	90	7.0	7.0	6.8	120	0000
	-	6.2 6.7 6.3 6.7 7.0	6.5	5.4 6.2 6.5 6.5 6.8 6.6	.120 .125 .120 .120	0.26 0.18 0.00 0.00 0.17 0.1 0.21 0.00 0.00 0.00 0.05 0.0 0.13 0.00 0.00 0.00 0.32 0.2 0.15 0.00 0.00 0.00 0.37 0.0
	04 : 05	6.3	0.9	5.5	.120	0.00
	63	6.7	6.4 6.0 6.5	6.2		0.26 0.21 0.13 0.15
	02	6.2	6.2	5.4	.115 .115	0.00
	10	5.6	5.7	5.2	.110	0.00
Exposure	Code 1	.v.B	WB (2.0 m)	WB (0.5 m)	c a	P1 P2 P4
Expo	Site		(9115		ock (	ordIA

\* No monthly summary was computed for the ranges.

5.3 5.8 5.9 5.6 6.8 7.0 6.6 4.5 6.2 4.7 5.5 7.9 7.1 9.3 7.0 7.2 6.8 4.8 4.4 4.4 4.7 5.6 5.0 5.0 6.0 5.8 5.0 6.0 7.0 6.6 6.5 7.5 7.5 7.5 6.7 5.0 6.7 5.2 5.6 8.5 7.0 10.0 7.0 7.5 6.5 5.0 4.5 5.0 6.0 5.8 5.4 6.0 6.2 6.8 7.5 7.7 6.5 5.4 7.2 8.4 8.7 10.8 7.3 11.0 9.9 7.7 7.0 4.7 5.4 5.2 5.1 5.5 5.7 5.3 1.35 1105 1125 1120 1120 1120 1120 1120 112	6.6 4.5 6.2 4.7 5.5 7.9 7.1 9.3 7.0 7.2 6.8 4.8 4.4 4.4 4.7 5.6 5.5 5.5 6.7 5.0 6.0 5.8 6.7 5.0 6.7 5.2 5.6 8.5 7.0 10.0 7.0 7.5 6.5 5.0 4.5 5.0 5.0 6.0 5.8 6.5 5.4 7.2 8.4 8.7 10.8 7.3 11.0 9.9 7.7 7.0 4.7 5.4 5.2 5.1 5.5 5.7 110 1125 1125 1120 1130 115 1135 1135 1135 1140 1120 1120 1125 1120 1115 0.00 0.00 0.00 0.00 0.00 0.00 0.0	WB (4.0 m)	WB (2.0 m)	WB (0.5m)	вь .	PS 0	
6.6 4.5 6.2 4.7 5.5 7.9 7.1 9.3 7.0 7.2 6.8 4.8 4.4 4.4 4.7 5.6 5.5 5.5 6.7 5.0 6.0 5.8 6.7 5.0 6.7 5.2 5.6 8.5 7.0 10.0 7.0 7.0 7.5 6.5 5.0 4.5 5.0 5.0 6.0 5.8 6.5 5.4 7.2 8.4 8.7 10.8 7.3 11.0 9.9 7.7 7.0 4.7 5.4 5.2 5.1 5.5 5.7 110 1125 1125 1120 1140 1130 1115 1135 1135 1135 1140 1120 1120 1125 1120 1115 0.00 0.00 0.00 0.00 0.00 0.00 0.0	6.6 4.5 6.2 4.7 5.5 7.9 7.1 9.3 7.0 7.2 6.8 4.8 4.4 4.4 4.7 5.6 5.5 5.5 6.7 5.0 6.0 5.8 6.7 5.0 6.7 5.2 5.6 8.5 7.0 10.0 7.0 7.5 6.5 5.0 4.5 5.0 5.0 6.0 5.8 6.5 5.4 7.2 8.4 8.7 10.8 7.3 11.0 9.9 7.7 7.0 4.7 5.4 5.2 5.1 5.5 5.7 110 1125 1125 1120 1130 115 1135 1135 1135 1140 1120 1120 1125 1120 1115 0.00 0.00 0.00 0.00 0.00 0.00 0.0	en	0.9	6.3	135	00 00	
6.6 4.5 6.2 4.7 5.5 7.9 7.1 9.3 7.0 7.2 6.8 4.8 4.4 4.4 4.7 5.6 5.5 5.5 6.7 5.0 6.0 5.8 6.7 5.0 6.7 5.2 5.6 8.5 7.0 10.0 7.0 7.0 7.5 6.5 5.0 4.5 5.0 5.0 6.0 5.8 6.5 5.4 7.2 8.4 8.7 10.8 7.3 11.0 9.9 7.7 7.0 4.7 5.4 5.2 5.1 5.5 5.7 110 1125 1125 1120 1140 1130 1115 1135 1135 1135 1140 1120 1120 1125 1120 1115 0.00 0.00 0.00 0.00 0.00 0.00 0.0	6.6 4.5 6.2 4.7 5.5 7.9 7.1 9.3 7.0 7.2 6.8 4.8 4.4 4.4 4.7 5.6 5.5 5.5 6.7 5.0 6.0 5.8 6.7 5.0 6.7 5.2 5.6 8.5 7.0 10.0 7.0 7.5 6.5 5.0 4.5 5.0 5.0 6.0 5.8 6.5 5.4 7.2 8.4 8.7 10.8 7.3 11.0 9.9 7.7 7.0 4.7 5.4 5.2 5.1 5.5 5.7 110 1125 1125 1120 1130 115 1135 1135 1135 1140 1120 1120 1125 1120 1115 0.00 0.00 0.00 0.00 0.00 0.00 0.0	8.8	7.0		.05	000.	
6.6 4.5 6.2 4.7 5.5 7.9 7.1 9.3 7.0 7.2 6.8 4.8 4.4 4.4 4.7 5.6 5.5 5.5 6.7 5.0 6.0 5.8 6.7 5.0 6.7 5.2 5.6 8.5 7.0 10.0 7.0 7.0 7.5 6.5 5.0 4.5 5.0 5.0 6.0 5.8 6.5 5.4 7.2 8.4 8.7 10.8 7.3 11.0 9.9 7.7 7.0 4.7 5.4 5.2 5.1 5.5 5.7 110 1125 1125 1120 1140 1130 1115 1135 1135 1135 1140 1120 1120 1125 1120 1115 0.00 0.00 0.00 0.00 0.00 0.00 0.0	6.6 4.5 6.2 4.7 5.5 7.9 7.1 9.3 7.0 7.2 6.8 4.8 4.4 4.4 4.7 5.6 5.5 5.5 6.7 5.0 6.0 5.8 6.7 5.0 6.7 5.2 5.6 8.5 7.0 10.0 7.0 7.5 6.5 5.0 4.5 5.0 5.0 6.0 5.8 6.5 5.4 7.2 8.4 8.7 10.8 7.3 11.0 9.9 7.7 7.0 4.7 5.4 5.2 5.1 5.5 5.7 110 1125 1125 1120 1130 115 1135 1135 1135 1140 1120 1120 1125 1120 1115 0.00 0.00 0.00 0.00 0.00 0.00 0.0	6.5			125 .	0 00.	
6.6 4.5 6.2 4.7 5.5 7.9 7.1 9.3 7.0 7.2 6.8 4.8 4.4 4.4 4.7 5.6 5.5 5.5 6.7 5.0 6.0 5.8 6.7 5.0 6.7 5.2 5.6 8.5 7.0 10.0 7.0 7.0 7.5 6.5 5.0 4.5 5.0 5.0 6.0 5.8 6.5 5.4 7.2 8.4 8.7 10.8 7.3 11.0 9.9 7.7 7.0 4.7 5.4 5.2 5.1 5.5 5.7 110 1125 1125 1120 1140 1130 1115 1135 1135 1135 1140 1120 1120 1125 1120 1115 0.00 0.00 0.00 0.00 0.00 0.00 0.0	6.6 4.5 6.2 4.7 5.5 7.9 7.1 9.3 7.0 7.2 6.8 4.8 4.4 4.4 4.7 5.6 5.5 5.5 6.7 5.0 6.0 5.8 6.7 5.0 6.7 5.2 5.6 8.5 7.0 10.0 7.0 7.5 6.5 5.0 4.5 5.0 5.0 6.0 5.8 6.5 5.4 7.2 8.4 8.7 10.8 7.3 11.0 9.9 7.7 7.0 4.7 5.4 5.2 5.1 5.5 5.7 110 1125 1125 1120 1130 115 1135 1135 1135 1140 1120 1120 1125 1120 1115 0.00 0.00 0.00 0.00 0.00 0.00 0.0	5.6	6.5	6.8	120 .	o 00 •	
6.6 4.5 6.2 4.7 5.5 7.9 7.1 9.3 7.0 7.2 6.8 4.8 4.4 4.4 4.7 5.6 5.5 5.5 6.7 5.0 6.0 5.8 6.7 5.0 6.7 5.2 5.6 8.5 7.0 10.0 7.0 7.0 7.5 6.5 5.0 4.5 5.0 5.0 6.0 5.8 6.5 5.4 7.2 8.4 8.7 10.8 7.3 11.0 9.9 7.7 7.0 4.7 5.4 5.2 5.1 5.5 5.7 110 1125 1125 1120 1140 1130 1115 1135 1135 1135 1140 1120 1120 1125 1120 1115 0.00 0.00 0.00 0.00 0.00 0.00 0.0	6.6 4.5 6.2 4.7 5.5 7.9 7.1 9.3 7.0 7.2 6.8 4.8 4.4 4.4 4.7 5.6 5.5 5.5 6.7 5.0 6.0 5.8 6.7 5.0 6.7 5.2 5.6 8.5 7.0 10.0 7.0 7.5 6.5 5.0 4.5 5.0 5.0 6.0 5.8 6.5 5.4 7.2 8.4 8.7 10.8 7.3 11.0 9.9 7.7 7.0 4.7 5.4 5.2 5.1 5.5 5.7 110 1125 1125 1120 1130 115 1135 1135 1135 1140 1120 1120 1125 1120 1115 0.00 0.00 0.00 0.00 0.00 0.00 0.0	. 8	7.5	7.5	120	0 00	
6.2 4.7 5.5 7.9 7.1 9.3 7.0 7.2 6.8 4.8 4.4 4.4 4.7 5.6 5.5 5.5 6.7 5.2 5.6 8.5 7.0 10.0 7.0 7.5 6.5 5.0 4.5 5.0 5.0 6.0 5.8 7.2 8.4 8.7 10.8 7.3 11.0 9.9 7.7 7.0 4.7 5.4 5.2 5.1 5.5 5.7 125 110 140 130 115 135 125 135 135 140 120 120 125 120 115 0.00 0.00 0.00 0.29 0.08 0.13 0.84 0.05 0.14 0.15 0.49 0.74 0.01 0.00 0.00 0.00	6.2 4.7 5.5 7.9 7.1 9.3 7.0 7.2 6.8 4.8 4.4 4.4 4.7 5.6 5.5 5.5 6.7 5.2 5.6 8.5 7.0 10.0 7.0 7.5 6.5 5.0 4.5 5.0 5.0 6.0 5.8 7.2 8.4 8.7 10.8 7.3 11.0 9.9 7.7 7.0 4.7 5.4 5.2 5.1 5.5 5.7 7.2 8.4 8.7 10.8 7.3 11.0 9.9 7.7 7.0 4.7 5.4 5.2 5.1 5.5 5.7 7.2 8.4 8.7 10.8 7.3 11.0 9.9 7.7 7.0 4.7 5.4 5.2 5.1 5.5 5.7 0.00 0.00 0.00 0.00 0.00 0.00 0	7.0	7.5		. 311	0 00.	
6.2 4.7 5.5 7.9 7.1 9.3 7.0 7.2 6.8 4.8 4.4 4.4 4.7 5.6 5.5 5.5 6.7 5.2 5.6 8.5 7.0 10.0 7.0 7.5 6.5 5.0 4.5 5.0 5.0 6.0 5.8 7.2 8.4 8.7 10.8 7.3 11.0 9.9 7.7 7.0 4.7 5.4 5.2 5.1 5.5 5.7 125 110 140 130 115 135 125 135 135 140 120 120 125 120 115 0.00 0.00 0.00 0.29 0.08 0.13 0.84 0.05 0.14 0.15 0.49 0.74 0.01 0.00 0.00 0.00	6.2 4.7 5.5 7.9 7.1 9.3 7.0 7.2 6.8 4.8 4.4 4.4 4.7 5.6 5.5 5.5 6.7 5.2 5.6 8.5 7.0 10.0 7.0 7.5 6.5 5.0 4.5 5.0 5.0 6.0 5.8 7.2 8.4 8.7 10.8 7.3 11.0 9.9 7.7 7.0 4.7 5.4 5.2 5.1 5.5 5.7 7.2 8.4 8.7 10.8 7.3 11.0 9.9 7.7 7.0 4.7 5.4 5.2 5.1 5.5 5.7 7.2 8.4 8.7 10.8 7.3 11.0 9.9 7.7 7.0 4.7 5.4 5.2 5.1 5.5 5.7 0.00 0.00 0.00 0.00 0.00 0.00 0	9.6			. 011	0 00.	-
4.7 5.5 7.9 7.1 9.3 7.0 7.2 6.8 4.8 4.4 4.4 4.7 5.6 5.5 5.2 5.6 8.5 7.0 10.0 7.0 7.5 6.5 5.0 4.5 5.0 5.0 6.0 5.8 8.4 8.7 10.8 7.3 11.0 9.9 7.7 7.0 4.7 5.4 5.2 5.1 5.5 5.7 110 140 130 115 135 1.25 135 135 140 120 120 125 120 115 0.00 0.29 0.08 0.13 0.84 0.05 0.14 0.15 0.49 0.74 0.01 0.00 0.00 0.00	4.7 5.5 7.9 7.1 9.3 7.0 7.2 6.8 4.8 4.4 4.4 4.7 5.6 5.5 5.2 5.6 8.5 7.0 10.0 7.0 7.5 6.5 5.0 4.5 5.0 5.0 6.0 5.8 8.4 8.7 10.8 7.3 11.0 9.9 7.7 7.0 4.7 5.4 5.2 5.1 5.5 5.7 110 140 130 115 135 1.25 135 135 140 120 120 125 120 115 0.00 0.29 0.08 0.13 0.84 0.05 0.14 0.15 0.49 0.74 0.01 0.00 0.00 0.00						
4.7 5.5 7.9 7.1 9.3 7.0 7.2 6.8 4.8 4.4 4.4 4.7 5.6 5.5 5.0 5.2 5.6 8.5 7.0 10.0 7.0 7.2 6.8 5.0 4.5 5.0 5.0 6.0 5.8 5.4 8.4 8.7 10.8 7.3 11.0 9.9 7.7 7.0 4.7 5.4 5.2 5.1 5.5 5.7 5.3 110 .140 .130 .115 .135 .125 .135 .149 .120 .120 .125 .120 .115 .125 .120 .100 0.00 0.00 0.00 0.00 0.00	4.7 5.5 7.9 7.1 9.3 7.0 7.2 6.8 4.8 4.4 4.4 4.7 5.6 5.5 5.0 5.2 5.6 8.5 7.9 7.1 9.3 7.0 7.2 6.8 4.8 4.4 4.4 4.7 5.6 5.5 5.0 5.0 6.0 5.8 5.4 8.7 10.8 7.3 11.0 9.9 7.7 7.0 4.7 5.4 5.2 5.1 5.5 5.7 5.3 110 .140 .130 .115 .135 .125 .135 .135 .140 .120 .120 .125 .120 .115 .125 125 120 0.00 0.00 0.00 0.00 0.00 0.00 0				125 .	0 00 .	
5.5 7.9 7.1 9.3 7.0 7.2 6.8 4.8 4.4 4.4 4.7 5.6 5.5 5.0 5.6 8.5 7.0 10.0 7.0 7.2 6.8 5.0 4.5 5.0 5.0 6.0 5.8 5.4 8.7 10.8 7.3 11.0 9.9 7.7 7.0 4.7 5.4 5.2 5.1 5.5 5.7 5.3 140 130 115 135 1.25 135 135 140 120 120 125 120 115 115 125 129 0.08 0.13 0.84 0.05 0.14 0.15 0.49 0.74 0.01 0.00 0.00 0.00 0.00 0.00	5.5 7.9 7.1 9.3 7.0 7.2 6.8 4.8 4.4 4.4 4.7 5.6 5.5 5.0 5.6 8.5 7.0 10.0 7.0 7.5 6.5 5.0 4.5 5.0 5.0 6.0 5.8 5.4 8.7 10.8 7.3 11.0 9.9 7.7 7.0 4.7 5.4 5.2 5.1 5.5 5.7 5.3 140 130 115 135 1.25 135 135 135 140 120 120 125 120 115 125 125 125 125 125 125 125 125 125	4.7			. 011	0 00.	
7.9 7.1 9.3 7.0 7.2 6.8 4.8 4.4 4.4 4.7 5.6 5.5 5.0 8.5 8.5 7.0 10.0 7.0 7.5 6.5 5.0 4.5 5.0 5.0 6.0 5.8 5.4 0.8 7.3 11.0 9.9 7.7 7.0 4.7 5.4 5.2 5.1 5.5 5.7 5.3 130 .115 .135 .125 .135 .135 .149 .120 .120 .125 .120 .115 .125 .125 .135 .140 .15 0.74 0.01 0.00 0.00 0.00 0.00 0.00	7.9       7.1       9.3       7.0       7.2       6.8       4.8       4.4       4.7       5.6       5.5       5.0         8.5       7.0       10.0       7.0       6.5       5.0       4.5       5.0       5.0       6.0       5.8       5.4         0.8       7.3       11.0       9.9       7.7       7.0       4.7       5.4       5.2       5.1       5.5       5.3         130       .115       .135       .135       .135       .140       .120       .120       .125       .125       .125         .08       0.13       0.84       0.05       0.14       0.15       0.74       0.01       0.00	5.5		8.7 1	140	.29 0	
7.1 9.3 7.0 7.2 6.8 4.8 4.4 4.4 4.7 5.6 5.5 5.0 7.0 10.0 7.0 7.2 6.8 5.0 4.5 5.0 5.0 6.0 5.8 5.4 7.3 11.0 9.9 7.7 7.0 4.7 5.4 5.2 5.1 5.5 5.7 5.3 115 .135 .125 .135 .135 .149 .120 .120 .125 .120 .115 .125 .120 .115 .125 .130 0.84 0.05 0.14 0.15 0.49 0.74 0.01 0.00 0.00 0.00 0.00 0.00	7.1 9.3 7.0 7.2 6.8 4.8 4.4 4.4 4.7 5.6 5.5 5.0 7.0 10.0 7.0 7.5 6.5 5.0 4.5 5.0 5.0 6.0 5.8 5.4 7.3 11.0 9.9 7.7 7.0 4.7 5.4 5.2 5.1 5.5 5.7 5.3 115 .13525 .135 .135 .140 .120 .120 .125 .120 .115 .125 .120 .115 .125 .131 0.84 0.05 0.14 0.15 0.49 0.74 0.01 0.00 0.00 0.00 0.00 0.00	7.9	. 25	8 0:	130	0 80.	
9.3 7.0 7.2 6.8 4.8 4.4 4.4 4.7 5.6 5.5 5.0 10.0 7.0 7.5 6.5 5.0 4.5 5.0 5.0 6.0 5.8 5.4 11.0 9.9 7.7 7.0 4.7 5.4 5.2 5.1 5.5 5.7 5.3 135 .125 .135 .125 .135 .135 .135 .140 .120 .120 .125 .125 .115 .125 .125 .135 .135 .135 .140 .15 0.74 0.01 0.00 0.00 0.00 0.00 0.00	9.3 7.0 7.2 6.8 4.8 4.4 4.4 4.7 5.6 5.5 5.0 10.0 7.0 7.5 6.5 5.0 4.5 5.0 5.0 6.0 5.8 5.4 11.0 9.9 7.7 7.0 4.7 5.4 5.2 5.1 5.5 5.7 5.3 135 .125 .120 .120 .125 .120 .115 .125 1.25 1.26 0.00 0.00 0.00 0.00 0.00	7.1	7.0	7.3	115	.13 (	
7.0 7.2 6.8 4.8 4.4 4.4 4.7 5.6 5.5 5.0 7.0 7.5 6.5 5.0 4.5 5.0 5.0 6.0 5.8 5.4 9.9 7.7 7.0 4.7 5.4 5.2 5.1 5.5 5.7 5.3 1.25 .135 .135 .149 .120 .120 .125 .120 .115 .125 1.05 0.14 0.15 0.49 0.74 0.01 0.00 0.00 0.00 0.00	7.0 7.2 6.8 4.8 4.4 4.4 4.7 5.6 5.5 5.0 7.0 7.5 6.5 5.0 4.5 5.0 5.0 6.0 5.8 5.4 9.9 7.7 7.0 4.7 5.4 5.2 5.1 5.2 5.1 5.5 5.7 5.3 125 135 135 149 120 120 125 120 115 125 1.05 0.14 0.15 0.49 0.74 0.01 0.00 0.00 0.00 0.00 0.00	. 6	0.01		135	.84 (	
7.2 6.8 4.8 4.4 4.4 4.7 5.6 5.5 5.0 7.5 6.5 5.0 4.5 5.0 5.0 6.0 5.8 5.4 7.7 7.0 4.7 5.4 5.2 5.1 5.5 5.7 5.3 135 .135 .140 .120 .120 .125 .120 .115 .125 1.14 0.15 0.49 0.74 0.01 0.00 0.00 0.00 0.00	7.2 6.8 4.8 4.4 4.4 4.7 5.6 5.5 5.0 7.5 6.5 5.0 4.5 5.0 5.0 6.0 5.8 5.4 7.7 7.0 4.7 5.4 5.2 5.1 5.5 5.7 5.3 135 .135 .140 .120 .120 .125 .120 .115 .125 7.14 0.15 0.49 0.74 0.01 0.00 0.00 0.00 0.00	7.0	7.0	6.6	125	0.05	
6.8 4.8 4.4 4.4 4.7 5.6 5.5 5.0 6.5 5.0 4.5 5.0 5.0 6.0 5.8 5.4 7.0 4.7 5.4 5.2 5.1 5.5 5.7 5.3 135 .140 .120 .120 .125 .120 .115 .125 1.15 0.49 0.74 0.01 0.00 0.00 0.00 0.00	6.8 4.8 4.4 4.4 4.7 5.6 5.5 5.0 6.5 5.0 4.5 5.0 5.0 6.0 5.8 5.4 7.0 4.7 5.4 5.2 5.1 5.5 5.7 5.3 135 .140 .120 .120 .125 .120 .115 .125 1.15 0.49 0.74 0.01 0.00 0.00 0.00 0.00	7.2	7.5	7.7	135	).14 G	-
4.8 4.4 4.4 4.7 5.6 5.5 5.0 5.0 4.5 5.0 6.0 5.8 5.4 4.7 5.4 5.2 5.1 5.5 5.7 5.3 140 1120 1120 1125 1120 1115 1125 1.49 0.74 0.01 0.00 0.00 0.00 0.00	4.8 4.4 4.4 4.7 5.6 5.5 5.0 5.0 4.5 5.0 5.0 6.0 5.8 5.4 4.7 5.4 5.2 5.1 5.5 5.7 5.3 140 .120 .120 .125 .120 .115 .125 1.49 0.74 0.01 0.00 0.00 0.00 0.00	8.9	6.5	7.0	135	.15 6	
4.4 4.4 4.7 5.6 5.5 5.0 4.5 5.0 5.0 6.0 5.8 5.4 5.4 5.2 5.1 5.5 5.7 5.3 120 120 125 120 115 125 1.74 0.01 0.00 0.00 0.00 0.00	4.4 4.4 4.7 5.6 5.5 5.0 4.5 5.0 5.0 6.0 5.8 5.4 5.4 5.2 5.1 5.5 5.7 5.3 120 .120 .125 .120 .115 .125 1.74 0.01 0.00 0.00 0.00 0.00	8.	5.0	4.7	140	0.49	
4.4 4.7 5.6 5.5 5.0 5.0 5.0 6.0 5.8 5.4 5.2 5.1 5.5 5.7 5.3 120 125 120 115 125 .01 0.00 0.00 0.00 0.00	4.4 4.7 5.6 5.5 5.0 5.0 5.0 6.0 5.8 5.4 5.2 5.1 5.5 5.7 5.3 120 .125 .120 .115 .125 .01 0.00 0.00 0.00 0.00	4.4	5.5		120	.74 0	
5.0 6.0 5.8 5.4 5.1 5.5 5.7 5.3 125 120 115 125	4.7     5.6     5.5     5.0       5.0     6.0     5.8     5.4       5.1     5.5     5.3       125     125     125       .00     0.00     0.00     0.00	4.	5.0		120 .	.01 0	
5.6 5.5 5.0 6.0 5.8 5.4 5.5 5.7 5.3 120 .115 .125	5.6 5.5 5.0 6.0 5.8 5.4 5.5 5.7 5.3 120 115 125	4.7	5.0	5.1	125 .	0 00.	
5.5 5.8 5.7 5.7 5.3 115 .125	5.5 5.0 5.8 5.4 5.7 5.3 115 .125	5.6	0.9	S. S.	120 .		
5.4 5.3 125	5.0 5.3 1.25		8.	5.7	115	0.00	
		5.0	5.4	5.3	125	00.	

WB - Wet bulb temperature (of)

RP - Barometric pressure (in. of Hy minus 29.0)

PS - Precipitation at 1.0 m. in open area (in.)
Pl - Precipitation at 46.0 m. akove canopy (in.)
P2 - Precipitation under full canopy (in.)

P3 - Precipitation under drip canopy (in.)
P4 - Precipitation under open canopy (in.)

## SUMMARY OF METEOROLOGICAL OBSERVATIONS

### HOURLY DATA SEPTEMBER 1967

02   03   04   05   06   07   08   09   10   11   12   13   14   15   16   17   18   19   20   21   22   23   24   Nos.   Monthly Summary     3   4   3   3   2   4   4   4   5   6   6   6   5   5   4   4   4   4   3   3   3   485   0   4   15     1   1   1   1   1   2   2   2   3   4   4   4   4   3   3   2   1   2   2   1   1   1   1   1   1		0	2		26.5 m 1	13.5 m	8.0 m	4.0 m 0	2.0 m	1.0 m	_
Monthly Means of Wind Speed by Hour    04   05   06   07   08   09   10   11   12   13   14   15   16   17   18   19   20   21   22   23   24   No		02	e		-	-		0			
Monthly Means of Wind Speed by Hour  (miles/hr.)  3 3 2 4 4 4 5 6 6 6 6 5 5 5 4 4 4 4 4 3 3 3 485  This level was not instrumented for wind speed at this time  This level was not instrumented for wind speed at this time  This level was not instrumented for wind speed at this time  This level was not instrumented for wind speed at this time  This level was not instrumented for wind speed at this time  This level was not instrumented for wind speed at this time  This level was not instrumented for wind speed at this time  This level was not instrumented for wind speed at this time  This level was not instrumented for wind speed at this time  This level was not instrumented for wind speed at this time		03	4		-			c			
Monthly Means of Wind Speed by Hour  (miles/hr.)  3 3 2 4 4 4 5 6 6 6 6 5 5 5 4 4 4 4 4 3 3 3 485  This level was not instrumented for wind speed at this time  This level was not instrumented for wind speed at this time  This level was not instrumented for wind speed at this time  This level was not instrumented for wind speed at this time  This level was not instrumented for wind speed at this time  This level was not instrumented for wind speed at this time  This level was not instrumented for wind speed at this time  This level was not instrumented for wind speed at this time  This level was not instrumented for wind speed at this time  This level was not instrumented for wind speed at this time		04	m		-			0			
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Monthly Means of Wind Speed by Hour (miles/hr.)  4 4 4 5 6 6 6 6 5 5 4 4 4 4 3 3 485  This level was not instrumented for wind speed at this time  0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		30	3								-
Monthly Means of Wind Speed by Hour (miles/hr.)   09   10   11   12   13   14   15   16   17   18   19   20   21   22   23   24   Ng of level was not in strumented for wind speed at this time   1				H					Η	1	
Monthly Means of Wind Speed by Hour  (miles/hr.)  4				his lev	2	his lev	his lev	0	his pev	his jev	
Mon  18   19   20   21   22   23   24   NQ of			4		7			G			
Mon  18   19   20   21   22   23   24   NQ of	Mont	11 6	S	not fr	က	not 17	not in	0	not in	not in	
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Mon  18   19   20   21   22   23   24   NQ of	dans of (miles	13		nted fo	4	nted fo	of bedn	0	nted fo	nted fo	
Mon  18   19   20   21   22   23   24   NQ of	Wind	1	<b>.</b>	r wind	4	r wind	r wind	•	r wind	r wind	
Mon  18   19   20   21   22   23   24   NQ of	Speed	15	۰	speed	4	speed	peeds	0	*peed	peed s	
Mon  18   19   20   21   22   23   24   NQ of	by Hou	16	S	at this	m	at this	at this	•	at this	at this	
19   20   21   22   23   24   NQ of			S	ttme	e	time	time	v	E E	time	
20   21   22   23   24   No of		18	4		7			0			
Mon 4 4 3 24 0050 4 4 3 3 485 2 1 1 1 700 0 0 0 0 712		19	4					0			
Mon   22   23   24   No of obs.   4   3   3   485     1   1   700     0   0   0   712					7			•			
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Mon 24 No of obs. 3 485 1 700 0 712		1-1						-			
Mon No of 0bs. 485 700 712			**		<b>-</b>				*** *** ***		
onthly Summary    Min. Mean Max.   0   4   15   0   0   0   1   0   0   1   0   0   1   0   0	Ž		485		700						_
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	speed	speed	9	4	peeds	4	7	speed	peeds
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	was not instrumented for wind speed at this time	was not instrumented for wind speed at this time	<b>®</b>	4	was not instrumented for wind speed at this time	4	7	was not instrumented for wind speed at this time	was not instrumented for wind speed at this time
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	46.0 m	28.5 m	26.5 m	13.5 m	8.0 m	m 0.7	2.0 m	0.	0.5 m

# SUMMARY OF METEOROLOGICAL OBSERVATIONS

### HOURLY DATA SEPTEMBER 1967

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Jumms										
Monthly Summary*										
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Wind hr.)	14	10	wind	^	wind	wind	•	wind	wind	wind
nges of Wir (miles/hr.)	11   12   13   14   15	13 13 10	ed for	~	ed for	o pa	-	o pa	ed for	to for
y Rang (r	12	13	ument	Ŋ	ument	ument	-	ument	ument	ument
Monthly Ranges of Wind Speed by Hour (miles/hr.)		თ	s not instrumented for wind speed at this time	4	s not instrumented for wind speed at this time	s not instrumented for wind speed at this time	-	s not instrumented for wind speed at this time	s not instrumented for wind speed at this time	s not instrumented for wind speed at this time
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5	[.eve]	46.0 m	28.5 m	26 m	13.5 m	8.0 m	4.0 m	2.0 m	1.0 m	0.5 m
Exposure	Site	- +	7.8			Fore		nd IA		<u> </u>
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No monthly summary	was computed for	the ranges
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	46.0 m	25.5 m	24.5 m	13.5 m	8.0 m	E :	E 2	E 0.1	0.5 m
			-1110	uədo	) PA!	ųρ t	ATU,		

ALBROOK (Forest site) SEPTEMEER 1967

							Rel		Frequ	encies	w jo *	ind Di	ative Frequencies* of Wind Directions by Hour at	yd st	Hour a	t 46.0	Ē.							
Ĭ ď	ō	8	ŝ	8	ŝ	8	6	8	8	92	Ξ	22	2	7	2	2	12	82	62	8	21	22	23	72
z				3.3	3.3		3.3		3.3	6.7				3.3		10.0	3.3		3.3	3.3	6.7	3.3	3.3	
NNE	3.3	6.7	3.3			10.0	3.3						3.4	3.3	3,3			3.3	3.3	3.3				
NE	3.3		3.3	3,3	13.3						6.7	3.3			-	3.3		3.3	6.7		3.3	3.3	10.0	6.7
ENE			6.7	6.7	3,3		10.0	3.3	3.3		3.3			3.3	3.3					3.3				
E		3.3	3.3	6.7		13.3	3.3	3.3							3.3								3.3	3.3
ESE	3.3								3,3		3,3	6.7		3,3										
SE	10.0		6.7	6.7	3.3			13.3	6.7	6.7	5	10.0		3.3		3.3		3.3		3.3		3.3		
SSE		3.3					3.3		6.7	6.7		6.7	13.7	3.3	13,3		3.3	6.7						
S	6.7	13.5	10.0	3.3	10.0	6.7	6.7	6.7	23.3	30.0	30.0	56.7	51.5	43.3	36.7	33.3	26.7	13.3	10.	0.01	13.3	10.0	6.7	6.7
SS:W		3.3	3.3		3,3		6.7	6.7	6.7	6.7	10.0		6.9	6.7		3.3	6.7	10.01				3.3	6.7	
SW	3.3	3.3		6.7		10.0		6.7	6.7	10.0		3.3	6.9		3.3	13.3	3.3	10.0 10.0	10.0	10.0	20.0	10.0		6.7
wsw	10.0	6.7	3.3		6.7	10.0	3.3	16.7	3.3	10.0	10.0	3.3	6.9	3.3		10.01	10.01	13.3	3.3	3.3	6.7		10.0	10.0
*	10.0	20.0	23.3	13.3	3.3		10.0	6.7	6.7	10.0	16.7		3.4	13.3	6.7	10.0	10.0	10.0	26.7	10.01	13,3	16.7	20.0	13.3
WNW	13.3	10.0	10.0	16.7	16.7	16.7	13.3	16.7	10.0	6.7	3.3		3.4	3.3	16.7		20.0	6.7	3.3	20.0 10.0		10.0	10.0	13.3
MN	10.0	13.3	6.7	3.3	20.0	10.0	6.7	6.7	13.3	3.3		10.0		6.7	6.7	3.3	6.7		6.7	6.7	6.7	13.3	6.7	10.0
MNZ	3.3	3.3	6.7	3.3			3.3		3.3		3.3					3.3		3.3		6.7	3.3	10.0		
CALM	23.3	13.3 13.3		26.7 16.7		23.3	26.7	13.3	3.3	3.3	3,3		3.4	3.3	6.7	6.7 10.0	_	16.7	26.7	26.0	16.7	16.7	23.3	30.0
· Note	D. 67	Due to tampling percentage market de ace ace 1000	Page Co	2000	and of	200	2	,														į	•	11111

ALBROOK (Forest site) SEPTEMBER 1967

_					:		Rel	ative I	reque	ncies*	of W.	nd Dir	Relative Frequencies* of Wind Directions by Hour at 26.5 m.	s by H	our at	26.5	ي							
												(%)												
±/a	ō	8	8	10	60	8	-00	80	8	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
2		10.3	6.9		6.9	3.4	10.3			10.0	6.7			10.01	10.01	6.9				6.7	6.7	6.9	3.4	
NNE	3.4	6.9	3.4	3.4						-									3.3	3.3	3.3	6.9		
Z							3.4		6.9	3.3	6.7	3.3			6.7								3.4	
ENE									3.4		3.3													3.4
凹			3.4	6.9				3,4			3.3			3,3	3.3		3.3							
ESE										10.0		3.3			3.3	3.4							1	
SE	3.4		3.4		3.4		3.4	3.4	6*9		6.7	3.3	6.9	10.0	3.3	6.9		3.3	3.3			3.4	<del> </del>	
SSE				3.4					3.4	3.3	10.0	10.0	24.0	3.3	3.3	3,4	10,0							
s	3.4	3.4	6.9		3.4	3.4	10.3	10,3	20,6	26.7	23,3	50.0	44.6	40.0	26.7	24.0	16.7	20.0	3.3	6.7		3.4	3.4	
SSW					3.4					3.3	6.7	3.3		3.3	6.7	6.9	3.3	3.3				3.4		
SW								24.0		3.3	6.7	6.7			6.7	3.4	6.7			3.3	3.3		3.4	
wsw					3.4				6.9	3.3		3.3			3.3	3.4		6.7			3.3	3.4		
W			3.4		3.4	3.4		3.4	6.9	6.7	3.3			6.7	3.3	3.4	3.3	10.0	6.7	6.7	3.3		6.9	3.4
WNW	10.3	3.4		10.3		10.3	10.3	13.7	3.4	3.3	6.7	6.7	13.7	6.7		3.4	3.3	6.7	10.0	6.7	6.7	10.3		6.9
NW	3.4	17.2	10.3	10.3	20.6	13.7	10.3	3.4	6.9	13.3	16.7			10.0	16.7	13.7	26.7	20.0	30.0	16.7	20.0	17.2	13,7	10.3
NNN	10.3	3,4	3.4 13.7 13.7	13.7	6.9	17.2	6.9	17.2	17.2	3.3		10.0	6.9	3.3	3.3	13.7	20.C	10.0	3.3	10.0	10.0	10.3	13.7	13.7
CALM	65.2	65.2 54.9 48.1	48.1	51.5	48.1	48.1	44.6	20.6	17.2	10.0			3.4	3.3	3.3	6.9	6,7	20.0	40.0	40.0 43.3 134.	43.31		51,5 61,9	61.9
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ullet Note: Dur to rounding, percentage totals do not equal 100 $e_{
m c}$ 

ALBROOK 'Forest site) SEPTEMBER 196/

				1			Re	ative	Freque	ancie.	M Jo	Ind Di	Relative Frequencie.* of Wind Directions by Hour at 4.0 m.	is by	four a	14.0 n	١.							
												(%)												
Ξ Ž	10	02	03	04	05	8	07	80	8	10	Ξ	12	13	14	15	36	17	18	19	20	21	22	23	72
z														3.3										
NNE																								
ZE																								
EVE	11												6.7											
я																								
ESE								3.3																
SE																								
SSE																								
S																								
SSW									3.3			3,3												
3W							3.3																	
wsw																								
A										3.3														
WNW												3.3	3.3											
NA																								
NN										3.3	3.3													
CALM	0.001 0.001 0.001 0.001 0.001 0.001	100.0	100.0	100.0	100.0	100.0	96.7	96.7		96.7 93.3	96.7	96.3	90.0	96.7	100.0	0.001 0.001 0.001 0.001 0.001 0.001 0.001 0.001 0.001	0.000	0.001	0.001	10° 00	10.001	0.00	0.001	0.001
· Note	• Note: Due to rounding percentage totals do not equal 1008	ronnido	Derce	intage to	neals do	000	100	6														Date:	HPPERORA. B. A. 45691	18081

• Note: Due to rounding, percentage totals do not equal 100%.

CHIVA CHIVA (Open site) SEPTEMBER 1967

							8	ative	Freque	ncies	y de	lative Frequencies* of Wind Litrections by Hour at 26.5	rection	ty S	four at	: 26.5	Ĕ.							
						!						(%)											i	
Dir	10	02	03	8	05	8	07	80	60	10	11	12	13	14	13	91	17	18	19	20	21	22	23	74
z	14.8	3.7	14.8	7.4	6.55	7.4	14.8	14.8	22.2	22.2	11.	7.4	3.7	14.8	7.2	14.2	7.2	7.2	7.4	18.5	18.5	14.8	25.3	3.7
NNE		14.8	11.1	3.7	7.4	7.4	3.7	7.4	11.11			3.7	3.7		10.7	3.5	14.2	3.5	11.1	11.1	_	14.8	7.4	
NE	3.7	3.7	3.7	7.4		7.4	7.4			7.4	7.4	3.7		3.7		7.2	7.2	3.5	3.7		3.7	3.7	3.7	3.7
ENE	0	3.7		3.7		7.4			3.7						3.5			i	3.7	7.4		3.7	7.4	
ш		3.7	7.4		3.7		3.7		3.7		3.7		3.7	3.7		-		3.5		3.7	11.1	3.7		
ESE	3.7		7.4	11.1	7.4		3.7	3.7					3.7		7.2		3.5			3.7	3.7	3.7		11.1
SE			3.7		3.7			11.1	7.4	11.11	3.7	7.4		7.4	7.2	3.5	7.2	3.5		3.7	7.4			
SSE		7.4		3.7		3.7			3.7	3.7	11.11	3.7	-	7.4	7.3	7.2	3.5	7.2	7.4	3.7		3.7	3.7	3.7
s	7.4	7.4	7.4			7.4	11.1	14.8	33.3	37.0	37.0	44.4	59.2	48.1	24.9	24.9	17.9	17.9	22.2	7.4				
SSW								3.7				3.7	3.7			7.2	7.2			3.7	3.7			
SW					3.7	3.7										7,2		7.2	3.7			3.7	3.7	3.7
wsw		7.4		18.5	3.7	7.4		3.7						3.7					3.7	3.7	3.7	3.7	3,7	3.7
æ	7.4	3.7			7.4	7.4	3.7	11.11			7.4	3.7			3.5			10.7		1	7.4	3.7	7.4	7.4
WNW	25.9	7.4	14.8	14.8	14.8	11.1			3.7		3.7	11:1	7.4		14.2	7.2	1.9		7.4	7.4			7.4	11.1
N Z	18.5	11.1	16.5	11.1	11.1	18.5	11.1	14.8	3.7	7.4	7.14		7.4	3.7	14.2	7.2	10.7	38.6	18.5	11.1	29.6	29.6	14.8	25.9
NZ Z	7.4	11.1	3.7	7.4		7.4		3.7		7.4		7.4	3.7	7.4		10,7	3.5	7.2	11.1	14.8	7.4	3.7	7.4	18.5
CALM 11.1 14.8	11.1	14.8	7.4	11.1	11.11	3.7	40.7	11.11	7.4	3.7	7.4	3.7	3.7								3.7	7.4	7.4	7.4
																						ķ	1	

• Note: Due to rounding, percentage totals do not equal 100%.

CHIVA CHIVA (Open site) SEPTEMBER 1967

							Rela	lative	Freque	ncies	₩ jo *	itive Frequencies* of Wind Directions by Hour at 4.0 m.	rection	l yd ar	Your a	14.0								
							,	,				(%)										j		
ž ď	10	03	03	۵	05	8	07	83	63	10	11	12	13	14	15	91	17	18	19	20	21	22	23	7,
Z		13.3	3.3	3.3 10.0	6.7	10.0	10.0	3.3	10.3	6.9	3.4	10.3	10.3	3.4	13.3	13.3	3.3	3,3	13.3	10.01		10.0	6.7	10.0
NNE	3.3		10.0	13.3	6.7	6.7							3.4	3.4	3.3	6.7	10.0			10.0	6.7	3.3	3.3	6.7
NE	20.0	6.7	13.3	13.3	6.7	6.7	3.3	3.3	3.4				3.4	3.4				3.3	6.7	16.7	19.0	13.3	3,3	13.3
ENE	6.7	10.0	10.0	3.3		6.7		6.7					3.4		3.3	3.3	3.3	3.3	3,3	6.7	3,3		10.0	6.7
ш	6.7	6.7		3.3	3.3			3.3	10.3	10.3	13.7			6.9	3.3			3.3			3.3	3.3	6.7	3.3
ESE				3.3	6.7			3.3	3.4	6.9		6.9			3.3		6.7		6.7	6.7	6.7	3.3		3.3
SE	3.3	3.3	6.7			6.7			6.9		13.7	10.3	3.4	13.7	10.0	6.7	13.3	6.7				3,3	3.3	
SSE	3.3	3.3	3.3		3.3	3.3			3.4	6.9	3.4			3.4	13.3	16.7	3.3	10.0	10.0		3.3			
S		6.7		6.7	3,3	3,3	13.3	16.7	24.0	41.2	27.5	41.2	54.9	44.6	16.7	20.0	13.3	6.7	10.0	6.7	3,3		0.01	
SSW								3.3				3.4				3.3		6.7						3.3
SW	3.3	6.7			6.7	3.3					3.4				3, 3		3,3				6.7	6.7	10.0	10.0
wsw			3.3	3.3		10.0	3.3	6.7	3.4			3.4	3.4		6.7	6.7	6.7	6.7	6.7	3.3	3.3		3.3	6.7
W	10.0	6.7	3.3		6.7	6.7	13.3			3.4		3.4	10.3	6.9	13,3	3,3	3,3	10.0	6.7	6.7	10.0	13.3	1	0.01
WNW	13.3	6.7		6.7	6.7	10.0		6.7	3.4	3.4	6.9	10.3		3.4	3.3	16.7	13.3	16.7	10.0	6.7	10.0	13.3	13.3	3.3
NW	16.7	6.7	26.7	13.3	10.0	10.0	6.7	20.0	13.7	10.3	10.3	6.9	3.4	10.3	6.7		6.7	16.7	13.3	10.0	23.3	16.7	16.7	16.7
NNW	6.7	16.7	10.C	10.0 13.3	10.0	10.0	3.3	10.0	6.9		10.3					3.3	6.7		6.7	10.0		3.3	6.7	3,3
CALM	6.7	6.7	10.0	10.0	13.3	6.7	46.7	16.7	10.3	10.3	6.9	3.4	3.4				6.7	6.7	6.7	6.7	10.0	10.0	6.7	3,3
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• Note: Due to founding, percentage totals do not equal 1000c.

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### SUMMARY OF NON HOURLY DATA

SEPTEMBER 1967

	Summary of Elem	ents with Non-hourly Fre		Observation		<b>18</b> weessage <b>8</b> .
Site	Element, Units and Exposise	Description	Number of Obs.	Minimum Value	Mean or Total Value	Maximum Value
	WSGT Index <sup>1</sup> (at 1.0 meters)	index value Dry buib temp. Wet bulb temp. Black bulb temp.	419 419 419 419	68.2 58.0 68.0 68.8	76.7 77.5 76.2 78.0	81.5 86.2 80.8 88.2
	Evaporation <sup>3</sup> (in. at 4 levels)	Piche (46.0) Piche (26.5) Piche (13.5) Piche (0.5)	30 29 28 23	0.024 0.024 0.006 0.006	5.573* 3.879* 1.177* 0.611*	0.360 0.244 0.104 0.104
Albrook (Forest site)	Precipitation from Raingauge Network <sup>2</sup> (in. at 1.0 meters)	Gauge # 1 Gauge # 2 Gauge # 3 Gauge # 4 Gauge # 5 Gauge # 6 Gauge # 7 Gauge # 8	31 31 31 30 33 33 29	0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01	12.62* 17.98* 16.88* 14.49* 13.79* 14.00* 12.75* 14.14*	3.15 4.72 3.95 3.87 3.25 3.48 3.15 3.51
	Stem Flow <sup>2</sup> (in. at 2.0 meters)	Small tree Medium tree Large tree	24 25 21	0.01 0.01 0.61	5.07* 4.75* 33.54*	0.99 0.93 11.00
te)	WBGT Index <sup>1</sup> (at 1.0 meters)	Index va':e Dry bull temp. Wat bulb temp. Black bulb temp.	420 420 420 420 420	66.9 67.0 67.0 66.5	79.8 80.3 7/ 9 90.0	90.9 99.0 86.5 120.6
Chiva Chiva (Open site)	Evaporation <sup>3</sup> (in. at 0.5 meters)	Piche Pan	2 <b>t</b> 20	0.012 0.046	3.525 <b>↑</b> 4.471 <b>↑</b>	0.281 1.893
Chiva	Minimum Grass temp <sup>3</sup> (°F at grass tips)	None	25	62.5	69.8	78.0

<sup>1 -</sup> Hourly observations between 0600 and 1900 hours inclusive

\*Total Talues

<sup>2 -</sup> Six hourly observations 3 - Daily observations

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mytid war and resident detailed microsol	imatic data for September 1967 from specific
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summarized for hourly and/or daily observa	tions from surface to 46-meter levels.
Elements listed are: temperature, pressur	e, precipitation, wind speed and direction,
relative aumidity, and evaporation.	
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